1: Karsten--40 (1916-18) 1935 Jivaro
226 (1928-29)

"My Indian servants practise fishing during the whole journey to eke out our store of food. From time to time they suddenly stop paddling and attentively watch the river some distance in front of the canoe, whereupon they seize their nets. In the shallow water close to the bank they have noticed a movement on the surface of the water which indicates that a multitude of bocachico fish are assembled on this very spot. One of the Indians arranges the long net in his hand, jumps into the water and cautiously wades to the place where the movement was noticed. The next moment he throws the net like a lasso, so that it unfolds on the outside of the spot where the fish is supposed to be assembled. The majority of them of course escape, but generally several of them are caught in the meshes of the net. Sometimes the Indians succeed in surprising in the same way a big bagre, s [sic] sheat-fish, and in such cases a fierce fight ensues in the water when the violent fish tries to disengage itself from the net and the firm grasp of the Indians. Generally, however, the Indians catch the sheat-fish by harpooning it."

"The customs of the Jibaros and the Canelos Indians in regard to fishing can be more briefly described. Generally speaking, there are five methods of catching fish which are practised by all the tribes: catching it direct with the hands in diving; with hook and line; with harpoons; with nets; and with poison.

In the small affluents of the bigger rivers, with a stony bottom, there lives a kind of small fish which the Indians are in the habit of catching simply with the hands. Moving about in his canoe and watching the bottom through the clear water, the Indian with his keen sight and experience is able to perceive the fish hiding the main part of its body under a stone. He immediately throws himself into the water, removes the stone with his hands, and catches the fish, which he kills by a bite in the neck. The Canelos Indians and the Jibaros usually have recourse to this mode of fishing when they are travelling or when they want some fish quickly. This kind of fish, which is called shachma by the Jibaros, is eaten by these Indians especially on occasions when they are bound to observe ceremonial fasting.

Most Indian tribes in Eastern Ecuador nowadays practise angling, using hooks received from the whites. Before the iron hooks were introduced, crooked bones were used for this purpose. Pieces of flesh and certain seeds serve as baits when angling. When the Indian throws out the line he whistles a chant in order to attract the fish.

Harpooning is an ancient and very common Indian method of catching large fish. The

Napo and the Canelos Indians use for this purpose lances about four metres long, made of the hard wood of the chonta palm. The harpoon itself consists of a barbed iron head fixed to a piece of wood, which is holed so that the shaft can be loosely inserted into it. One end of a long string or line is fixed to this head, the other [176] end of it being attached to the shaft. The struggle of the fish, when hit by the harpoon, immediately causes the head to be detached from the shaft, and the latter floats on the water, but remains connected with the fish by the line, thus serving as a buoy to mark the position of the fish. The fish is then gradually tired out and drawn nearer to the harpooner who is then able to kill it. This is especially the method of catching the paichi (Arapaima gigas), an enormously large fish living in the great rivers and lagoons of Amazonia, as well as the somewhat smaller sheat-fish, called sungarápu by the Quichua-speaking Indians and tungá by the Jibaros.--The great water boa or anaconda--when the Indians dare to attack it at all--is caught and killed in the same way.

The lance must necessarily be of chonta wood, not only because it is very hard, but also because the chonta palm is to the Indians a demoniacal tree owing to its large thorns. A harpoon made of this wood is therefore supposed to hit and kill the fish better than one made of any other wood.

Before iron harpoons were introduced among the Indians, they used harpoons or

lances wholly made of chonta, the end of the lance being pointed and provided with barbs. Smaller harpoons of this kinds [sic] are still used at least by the Canelos Indians and the Jibaros, who make them of a kind of wild cane or bamboo called shingyána. The original knife of the Indians, which is still used on certain ceremonial occasions, was made of the same kind of cane.

Before the Canelos Indian goes out to harpoon the paichi or the sungarápu, he ties round the wrist of his right hand the rind of a certain tree which these Indians call nina cara cáspi ('the fire rind tree'). This rind is believed to make the arm very strong and steady to point and throw the harpoon at the fish.

Net-fishing is also commonly practised by the Indians of Eastern Ecuador. The nets are always spun of the strong fibres of the chambira palm. There are, two ways of using these fibres; sometimes they are used in their natural state, directly taken from the chambira leaves and dried. Of these crude fibres the Indians also make the large bags (shigra) in which they carry their clothes when travelling. For making nets, on the other hand, the string is prepared in a special way. The chambira leaves are first boiled for many hours, so that the fibres dissolve and, pulled with the fingers, produce a soft flax-like pulp, which is spun in the ordinary way into a fine but exceedingly strong thread. It is from this thread that the nets are made. The nets have much the same [177] shape as those used by the whites, but are generally smaller, at least

among the Jibaros. These Indians, living as they always do on the banks of small rivulets or affluents of the bigger rivers, mostly catch with their nets (called nekka) only small sardine-like fish. The Canelos Indians, who use their nets (lica) in the big rivers Bobonaza and Pastaza, make them somewhat larger, several metres in length. Along the lower edge of the net small round stones are attached so as to keep it down in the water. To the upper edge are tied pieces of a light kind of wood, called balsa, which serve as floats.

The Indian uses his net in different ways. Sometimes he closes the mouth of a small rivulet or affluent with it, leaving it suspended there for some hours or a whole night, in order to catch the fish entering the main river. His favourite method of using the net, however, is by throwing it. The Indian, having the net folded in his hand, is able to throw it upon the water like a lasso in such a way that by a single cast it becomes extended almost to its whole length. Thus he surprises and catches the fish gathered on a certain spot, which he recognizes from certain movements on the surface of the water. The bocachico (called challua in Quichua) is the fish most frequently caught in this way. This fish is in the habit of gathering in great numbers especially on the spot where a small river empties itself into a larger, or close to the flat banks of the rivers. The Indian then approaches with great caution in his canoe or wading in the water, and throws his net in such a way, that it either falls directly upon the fish if the ground is

flat, or remains floating above them if the water is somewhat deeper, thus barring the way for the escaping fish and catching them.

Frequently when the Indians, travelling in a canoe, come to a spot in the river where many fish are evidently collected, and where the water is not so deep that it is necessary to swim, they use their nets as in trawling. The Indians jump into the water extending the net across it. It is held by three men, one at each end, and one in the middle. They then pass the net slowly down the river trying to catch the fish going up against the stream. As soon as the Indians feel that a fish is caught in the net, they at once loosen it and kill it by biting it in the neck, and throw it into the canoe following them."

1: Karsten--177-178 (1916-18) 1935 Jivaro-1
116, 226, 278 (1928-29)

"The last and most interesting method used by the Indians in fishing is by poisoning the water in the river. The poison most commonly used for this purpose is the one known under its Spanish name barbasco, a name also used by the Quichua-speaking Indians in Eastern Ecuador. [178] Under this name, however, various poisonous plants are comprehended. The plant most commonly used is probably Cracca toxicaria, which is cultivated both by the savage Jibaros and the Canelos Indians. The same plant, as we have seen, is used at the preparation of the arrow-poison. The root of the bush is the part used. Several roots are first crushed with a club in a hole made for the purpose in the ground, to free the poisonous juice they contain. Then they are put into one or several baskets woven of forest vines, of the kind used by all Indians.

There is also a wild varvasco plant which has the form of a vine. For the purpose of extracting the poison the vine itself is crushed and the juice is pressed out, just as is done with the roots of the cultivated barbasco plant. The scientific name of this vine is unknown.

The savage Jibaros, however, have two fish poisons more, of which the one is called massu (probably Paulinia or Sejania species, of the family Sapindaceae). The leaves and the stem of this plant are the parts used; they are crushed with clubs in a hole in the ground, the mass is soaked in some water and the poisonous liquid used in the same way as the ordinary varvasco poison. The other fish poison is by the Jibaros called

payashi (Paulinia pinnata?), of which the root is used in the same way as the root of the varvasco."

1: Karsten--179-180 (1916-18) 1935 Jivaro-1
116, 226 (1928-29)

"The small river or rivulet, where the Indians propose to fish, has previously been barred with stones and sticks arranged so as to form a kind of fence, the whole thing forming an angle, the point of which is placed in the middle of the river. At this point there is a kind of small platform made of split bamboo placed in an oblique position with the upper side outwards. On this platform, which is called barbacoa, the poisoned fish will appear and be caught, brought there by the stream.

At a little distance above this spot the poison is put into the river, the baskets containing the varvasco roots being repeatedly sunk in the water, again beaten with clubs, again sunk, and so on, until the main part of the poison has run through the holes of the basket into the river. The poison is rapidly spread all over the water with the stream and drops downwards, thus poisoning the whole river at that particular spot. The fish, of whatever kind it may be, have little power of resistance against the varvasco poison, although they are generally not killed but merely stupefied. About a half an hour after the poison has been thrown out all sorts of fish are generally seen floating on the surface of the water, all being brought by the stream towards the barbacoa. The Indians at once start to catch them, some moving about in canoes, others wading in the water, and seizing some of the fishes with the hands, whilst the larger ones are speared. The rest are taken up at the barbacoa.

Sometimes the Indians do not deem it necessary to construct any barbacoa at all,

but they simply throw the varvasco poison into the river, allowing it to flow down with the current. After a while they go down the river in their canoes, catching the fish which is seen to float on the surface of the water, stupefied and half dead. The Indians told me that the large sheat-fish is almost the only fish that cannot be caught with varvasco poison. It seems to feel instinctively when the water has been poisoned and speadily [sic] gets away down the river so as escape the effects of the poison.

By this method enormous quantities of fish are often caught in a few hours. The Indians have recourse to it especially when they want to provide a large supply of fish for a feast.

The varvasco is also poisonous to man, but does not in any way affect the flesh of the fish killed or stupefied with it.

Fishing with varvasco poison is a genuinely Indian method of fishing on a large scale. The discovery of this poison and the use made of it reveals, in its way, the Indian's wonderful knowledge of pharmacology [180] which also, and still more strikingly, appears in his preparation of the arrow-poison.

The Indians, especially the Jibaros, preferably choose moonlight nights for fishing, experience having taught them that the fish are then more easily caught."

1: Karsten--180 (1916-18) 1935 Jivaro
116, 226, 777 (1928-29)

"Just as the Indians use misha for hunting, they use such charms also for fishing, consisting of peculiarly shaped stones and other hard objects found in the stomachs of fish caught. A Canelos Indian showed me once such a misha, which he himself had bought at a high price from the Napo Indians. It was a small round coloured stone, in which the water had engraved certain spiral lines and formed in such a way that it was somewhat like a snail. The stone had been swallowed by a bagre and was found in its stomach by the Indians who caught it. The Canelos Indian would not sell the stone to me at any price, believing that it would give him extraordinary luck in fishing the bagre. Such a charm is used by the hook being rubbed with it before it is throw [sic] out in the water. This treatment is believed to draw the fish to the hook.

Charms consisting of the spines and heads of large fishes are also frequently found in the Indian huts together with the skulls and bones of animals killed in hunting. The spines are believed to have the same effect, namely, to attract the fish and to give good luck in fishing."

2: Stirling--103 [3] (1930-1931) 1938 Jivaro
116, 226, 262

"In the higher mountain regions where the streams are small and torrential very few fish occur. In most of these streams the only food fish is the naiumbi, a curious looking fish whose body is surrounded by a hard shell and which attached itself on the under surface of rocks by means of a sucking appliance similar to that of the pilot fish. These ugly and bony creatures, while not very delectable in appearance, are sometimes the only available food supply in the gameless regions of the higher mountains. The Indians capture them by simply wading out into the stream and overturning rocks to which they are attached, removing them with their fingers. In the lower regions and along streams which are less turbulent fish life is very abundant and the Indians have devised many different ways of capturing them. Fishhooks are seldom used excepting where the Indians have been able to obtain them from the whites. The Jivaros apparently do not make or use fish nets at the present time.(26)"

"26. Up de Graff describes the use of nets among the Antipas, saying: 'Their nets are made of palm fiber, and in place of corks and leads they use balsa wood and stones. The net is fixed across a rivulet, and the party makes its way by a detour to a point upstream. There they throw stones into the water and frighten the fish into a hurried flight to where the trap awaits them. The meshes of the nets are so proportioned as to catch the fish by the gills as they rush downstream.' Up de Graff, p. 210."

2: Stirling--104
116, 226, 278, 461

(1930-1931) 1938

Jivaro

"The aboriginal methods of fishing appear to be poisoning, trapping, and spearing. Fish traps as a rule are constructed during high water in overflow areas where streams are about to subside, or along small swollen streams up which fish have ascended from the main rivers. For poisoning fish a dam is generally constructed along a small stream during low water. Barbasco shrub is gathered in sufficient quantities, macerated by means of pounding it between large stones, and then thrown into the water, being careful to distribute it evenly at a point 30 or 40 yards above the fish dam. The juice of the plant spreading through the water stupefies the fish, which rise to the surface in a more or less helpless condition, where they are gathered up by the Indians. On these fish-poisoning occasions generally a large part of the community participate; men, women, and children taking part and make of it an enjoyable social affair."

4: Up de Graff--209-210 (1897) 1923 Jivaro
116, 226, 278

"Anxious to see how the Antipas supplied themselves with fish, I once went with them (men and women) for a day's sport to a small stream a couple of miles from the settlement. While making our way along the trail, the women cut down barbasco wood (the Inca name for a vine whose sap is a deadly poison) and packed it along with them. Arrived at the water's edge, we looked for a suitable pool, exercising great care not to scare the fish away. The party divided into two sections, and each formed a barrier at one end of the pool. The men proceeded to pound the barbasco between heavy stones and throw it into the pool, where it floated about without having any apparent effect on the water. Within a minute or two the fish began floating to the surface, upside down, and swam about aimlessly in a dazed condition, easy prey for the savages who waited about (swimming and diving themselves when necessary) collecting them. We caught in half an hour at least a hundred pound weight.

This is the only method of catching fish they know, [210] except netting. Their nets are made of palm-fibre, and in place of corks and leads they use balsa wood (Spanish) and stones. The net is fixed across a rivulet, and the party makes its way by a detour to a point up-stream. There they throw stones into the water and frighten the fish into a hurried flight to where the trap awaits them. The meshes of the nets are so proportioned as to catch the fish by the gills as they rush down-stream."

10: Anthony--153 [2] (1920-21) 1921 Jivaro
116, 226

"The Jivaro lives along the water courses and does considerable fishing in a very ingenious fashion. A variety of creeper or vine called barbasco, is gathered at some point along a stream, and then the plants are pounded into a pulp upon the rocks. When sufficient barbasco has been prepared--the quantity may total from two to three hundred pounds--and the Indians have stationed themselves down stream, the mass is thrown into the river. The juice of the bruised vine is a poison and, if the river is not flowing a great volume of water, it kills any fish in its path for a distance as great as three miles down stream. The Jivaros catch the fish as they come floating along belly up and in this way secure great hauls. The use of barbasco does not spoil the fish for human consumption, as we can attest through personal experience. One disadvantage in its use is the heavy drain upon the fish life of that particular region, and a stream cannot be fished in this manner indefinitely. Even a large river may be poisoned by this comparatively small amount of barbasco."

12: Rivet--603-604 (no date) 1907 Jívaro-1
116, 226

For fishing the Jíbaros use the barbasco (Jacquinia armillaris). They make two or three holes in the ground where they put a great quantity of branches and roots of this plant, then armed with big pointed sticks, they crush them in order to form a sort of paste of the earth and the juice of the plant. During this time, other Jíbaros 150 or 200 m. downstream construct the atarraya: a barrage formed of interwoven sticks, securely set in the bed of the stream and extending the whole width of the latter, is instructed at a point where the gradient of the stream is steeper than elsewhere; it is destined to support the weirs. The latter are large parallelopiped rectangles made with sticks of cana guadua (Guadua angustifolia) and measure 3 m. long, 60 cm. wide. The apparatus is oriented against the current, the open forward end resting on the sream bed itself and the rear end on the dam. The barbasco paste is then thrown into the water, which becomes milky and soapy at its contact. The fish are stupefied in a few minutes, and rise to the surface, bellies upward. Swept along by the current, they are stopped by the traps. When the stream of water is too large to install an atarraya, the Indians catch the fish themselves, it is marvellous to see them swim with an indescribable dexterity, seize [604] the fish with their hands, teeth, even the feet and bring them to the canoe. Their skill is such that a missionary has seen them trap fish swimming without using barbasco. He also saw them beat the stream, divid- into two groups, so as to drive the fish toward one bank and harpoon them with lances

in the cavities of the rocks where they take refuge (1). Hunting of the manatee (Manatus americanus) and big fish (particularly the Vestres gigas) is also done with the lance.

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1. Voyage d'exploration d'un missionaire dominicain, etc..., op. cit., p. 172-173.

25: Vigna--44-45 (no date) 1945 Jivaro
116, 226, 462

Fishing is carried out indiscriminately by men and women. With the crushed root of the barbasco they numb[45] the fish in the brooks or rivers. They are then gathered in a sort of mat which is placed a certain distance from the spot in which they have thrown the barbasco. The Jibaros are fond of fish and fishing constitutes a social event.

26: Brüning--66 (1902) 1928 Jívaro
116, 226, 262, 411

In addition to meat the Indians eat a great deal of fish. Fishing is done by a variety of methods. They obtain the largest catch when they stupefy fish. For this purpose they use two plants, each one separately. One is the herbaceous plant másu, the other the bark of a liana (tímu). Both are pulverized and thrown in quiet coves of the rivers and brooks. The narcotized fish soon come to the surface where they are speared with long pointed chonta sticks (šikít). These fishing spears have a circular cross-section and a diameter of about 2 cm. Their length is 3 - 3.5 m.

When the rivers are on the rise, the Indians are quick to make an estacada (a sort of grill) of bamboo and place it across the mouths of the brooks and inlets. When the waters are falling again, the fish remain behind these estacadas. The natives even use fish-hooks which are a desirable article of barter.

These are the main articles of food in the realm of fauna. According to the rubber collectors, the natives are said to eat a large beetle larva which occurs in decaying wood.

28: Tessman--350-351 (No date) 1930 Jivaro
116, 226

Fishing is just as important as hunting. They stupefy the fish with the poison of a wild leguminous plant (barbasco), called tímu by the Aguarunas and tímiŏ by the Atschual Indians. Another fish-poison is Clibadium (Aguaruna: máso, Atschual: măsgŏ). They also have a weir (Aguaruna: wašim, Atschual: wăsimp). The fish-hook is called sa̱u. According to Karsten (Contributions, p. 53) it was formerly made of bone. Fish-nets (lika), according to Karsten, are several meters long. At the bottom they are weighed down with stones, on top [351] they are equipped with pieces of Ochroma-wood. They are primarily used to fence off watercourses, but also as casting nets. and even, when held by three men, as hand-nets. Before fish are stupefied the watercourses are obstructed with an angular fence, on top of which there is a seating platform. (See Karsten, Contributions, p. 56). From this platform the stupefied fish are caught. According to my information fish are also speared with a spear-point made of palm-wood.

34:Harner E-4, 5 (1956-1969)1973 SD9 Jivaro SD9

but was still largely isolated from colonists' incursions by the swift, bridgeless Río Upano and its often deep canyon (see Plate 1), which acted as an obstacle throughout its length to eastward migration by the horse-dependent settlers. These localities (excluding missions and their environs) had, together with other areas of minimal white penetration, an estimated total population of approximately 2,205 persons. Beginning with Chapter II, the present tense will be used to describe interior Jívaro culture as it existed at the time of the original fieldwork. In other words, the "ethnographic present" is 1956–57.

Whether this population in the northern and eastern portion of the tribe was larger or smaller than in previous decades is difficult to determine in the absence of written records. It does appear, however, that three of the localities involved, the Río Chiguasa region, the middle Río Macuma area, and the Río Yaupi Valley, were not occupied by the Jívaro until around the turn of the century. These occupations were the consequence of head-taking raids by the Jívaro which forced the Achuara (*ačuarä šuarä*) to retreat northeastward from the Chiguasa and middle Macuma areas and the Huambisa (*tsumu šuarä*) to withdraw southward from the Yaupi region. This territorial expansion by the Jívaro was a by-product, rather than a conscious purpose, of their *tsantsa* raids against these adjacent tribes.[36]

Once vacated, such formerly enemy-held regions attracted Jívaro from the Río Upano Valley, elderly *untsuri šuarä* informants explained, because the hunting and fishing were better than in the Upano area. The superior hunting and fishing were also given as the reason that families had, for decades at least, moved eastward across the Cordillera de Cutucú to join their tribesmen already settled there. Later, when white colonists entered the Upano Valley in large numbers from the

34:Harner E-4, 5 (1956-1969)1973 SD9 Jivaro SD9

beer making, while shorter ones store the water with which the men rinse their mouths upon arising and after eating. Other gourds are cut in half and perforated to serve as sieves in straining manioc fibers out of the beer. Tree gourds are used by men as canteens for carrying the thick beer mash when hunting or traveling far.

Three kinds of baskets are made, all by the men: a plaited openwork basket used primarily for carrying and storing food; a wickerwork type for carrying fish; and a relatively insect-proof plaited and double-walled basket with a banana leaf lining and a cover for storing featherwork and other personal effects. Matting is unknown.

Virtually every adult male possesses at least one firearm for hunting and fighting. While there are a few ancient Winchester .44 carbines obtained from the Achuara, almost all the guns are Spanish-made muzzle-loading shotguns of recent manufacture secured primarily from trading partners dwelling in the region of white contact in the Río Upano Valley.

Most of the Winchester carbines, although originally pump-action weapons, are so worn that they can function only as single-shot weapons. For fighting, they are loaded with highly valued .44 pistol cartridges obtained through native trading partners from the Achuara, who in turn secure the cartridges from other trading partners in Peru. For hunting, the cartridges are simply reloaded with black powder and shot, and the cartridge primer is replaced with the type used on muzzle-loading shotguns.

The shotguns, percussion-cap weapons usually with a 20-gauge bore, are much preferred over the Winchesters for hunting and also are much more plentiful throughout the tribe due to their steady acquisition by means of the native trading partnerships. They are loaded with black powder

34:Harner E-4, 5 (1956-1969)1973 SD9 Jivaro SD9

they drink from jars of beer placed before them, and the *wea* declares, "I am very hungry. Bring me plenty of fish." This is a metaphorical allusion to the Achuara, who subsist on fish much more than the Jívaro, and to the *tsantsa* which are to be brought back wrapped up in cloth, much as fish are brought from the river wrapped in moist leaves to keep them fresh.

The *kakaram* warrior sponsoring the raid is usually the expedition leader or chief. There is no special title for this role, beyond the usual *untä*. There may be two war chiefs if the neighborhood that has the biggest representation in the expedition is one other than the sponsor's. The war leader(s) is theoretically expected to be strictly obeyed by the other members of the party, but only for the duration of the expedition, while it is in hostile territory.

Obedience, even on a war expedition, is often not as rigorous in practice as it is in theory. Any member of the party who tells the war leader that he has "dreamed badly" and therefore would like to avoid participating in the attack, is invariably excused from such participation. In the actual attack, some of the inexperienced and less aggressive warriors are backed up by a few *kakaram* who encourage their advance forward.

Since the war expedition is normally composed of men from a number of neighborhoods, some of whom are bound to be enemies of others, the members of the party tend to be organized into a "buddy system" in which pairs of close relatives "cover" one another from assassination by another expedition member. In this manner, it is possible to organize a large force despite the fact that many of its members may be enemies. This system has undoubtedly contributed to the ability of the Jívaro to ally against outside invaders in the past.